FILM HOLE PUNCHING SYSTEM, METHOD AND ARTICLE OF MANUFACTURE

Abstract of the Disclosure

A method and device allows for high speed hole punching in a film of material. An optical encoder is mounted at the end of a roller counts the number of rotations of the roller over a time period. The optical encoder is attached to a computer that uses the diameter of the roller and the rotation rate to calculate the speed of a film that moves across the roller. The computer also regulates hole punching solenoid valves. The computer actuates the valves so that they fire at a rate sufficient to cause holes to be punched through the film material certain desired distances apart. The speed of the roller and the film may be increased or decreased with the computer automatically altering the timing of actuation of the hole punching valves. This allows for very high roller and film speeds with accurate hole punching of the film. This also allows for a change in film speed without the need to manually adjust hole punching devices. In addition, each hole punching device is regulated independently such that different hole punching devices may be actuated with different amounts of force and pressure.